

SIDEBAR**The STEM Workforce of the United States**

The science, technology, engineering, and mathematics (STEM) workforce is made up of individuals at all education levels who work in a wide variety of occupations. This workforce is defined by broad occupation type—science and engineering (S&E), S&E-related, and middle-skill occupations—and by educational attainment—either having at least a bachelor’s degree or not.

S&E occupations typically require a bachelor’s degree for entry and are broadly composed of workers who are computer and mathematical scientists; biological, agricultural, and environmental life scientists; physical scientists; social scientists; and engineers.

S&E-related occupations require STEM skills and expertise, but they do not fall into the five main S&E occupational categories listed above. The main occupational categories and positions that make up this group include health care workers, S&E managers, S&E precollege teachers, and technologists and technicians.

Middle-skill occupations require considerable STEM skills and expertise but do not typically require a bachelor’s degree for entry. These positions are primarily in the areas of construction trades, installation, maintenance, and production.

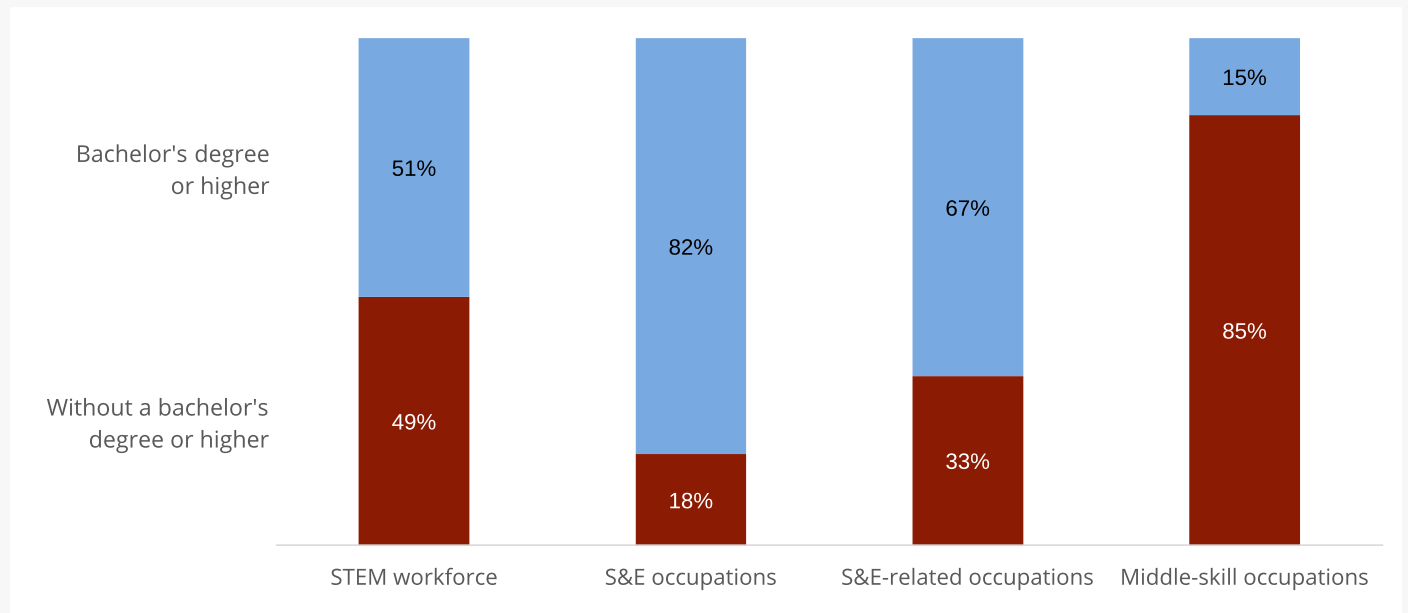
STEM workers with a bachelor’s degree or higher and those without such a degree are employed in all three broad occupation types (figure 1-A). However, their distribution tends to reflect the degree or training requirements of the occupations in each broad group. S&E occupations often require advanced education, so most of those workers have at least a bachelor’s degree (82%). In contrast, middle-skill occupations tend to require certification, licensing, or on-the-job training and thus have a high percentage of workers without a bachelor’s degree (85%).

Grouping STEM workers by educational attainment creates two workforce groups. The STEM workforce with at least a bachelor’s degree includes individuals who have attained a bachelor’s degree or higher and who work in S&E, S&E-related, or middle-skill occupations. These workers include engineers; software developers; physicians; registered nurses; industrial production managers; and farmers, ranchers, and other agricultural managers.

The STEM workforce without a bachelor’s degree, referred to as the skilled technical workforce, is comprised of workers in S&E, S&E-related, and middle-skill occupations that require a high-level of knowledge in a technical domain but do not require a bachelor’s degree. These workers hold positions such as computer support specialists, industrial engineers, licensed nurses, pharmacy technicians, carpenters, and electricians.

Figure 1-A

STEM workforce ages 18–74, by education: 2021



S&E = science and engineering; STEM = science, technology, engineering, and mathematics.

Note(s):

Civilian noninstitutionalized population plus armed forces living off post or with their families on post.

Source(s):

Census Bureau, Current Population Survey, Annual Social and Economic Supplement, 2021.

For more information about the STEM workforce, see the infographic [Workforce Statistics](#)* and the *Science and Engineering Indicators 2022* report [The STEM Labor Force of Today: Scientists, Engineers, and Skilled Technical Workers](#).†

* National Center for Science and Engineering Statistics (NCSES). 2022. *Workforce Statistics*. Infographic NCSES 22-203. Alexandria, VA. Available at https://nces.nsf.gov/136/assets/0/files/nces_workforcestatistics_onepager.pdf.

† National Science Board, National Science Foundation (NSB, NSF). 2021. *The STEM Labor Force of Today: Scientists, Engineers and Skilled Technical Workers*. *Science and Engineering Indicators 2022*. NSB-2021-2. Alexandria, VA. Available at <https://nces.nsf.gov/pubs/nsb20212>.